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PTO/SB/05 (11-00)

Approved for use through 10/31/2002. OMB 0651-0032

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# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 678-1109 (P10973)

First Inventor Chang-Soo Hwang

Title TRANSMITTING AND RECEIVING APPARATUS

Express Mail Label No. EV 333229179 US

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 59]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure

4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 15]

5. Oath or Declaration [Total Pages 7]

- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
  - i. ☐ DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s)  
named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

6. ☒ Application Data Sheet. See 37 CFR 1.76

## ADDRESS TO:

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ paper
  - c. ☐ Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☒ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Request and Certification under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☒ Other: Checks for \$1,900.00 & \$40.00

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: \_\_\_\_\_

Prior application information: Examiner \_\_\_\_\_ Group Art Unit: \_\_\_\_\_

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)

or ☐ Correspondence address below

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Name (Print/Type)

Paul J. Farrell

Registration No. (Attorney/Agent) 33,494

Signature

*Paul J. Farrell*

Date 10/9/03

CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this correspondence and the documents referred to as enclosed are being deposited with the United States Postal Service on date below in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV 333229179 US addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: October 9, 2003

John F. Gallagher III

22389 U.S. PTO

10/681937



100903

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**FEE TRANSMITTAL  
for FY 2003**

Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT** (\$ ) 1,940.00**Complete if Known**

Application Number	not yet known
Filing Date	herewith
First Named Inventor	Chan-Soo HWANG
Examiner Name	not yet known
Art Unit	not yet assigned
Attorney Docket No.	678-1109 (P10973)

**METHOD OF PAYMENT** (check all that apply)☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☐ Deposit Account:Deposit  
Account  
Number  
Deposit  
Account  
Name

04-1121

Dilworth &amp; Barrese LLP

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments☒ Charge any additional fee(s) during the pendency of this application☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	770.00
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	
<b>SUBTOTAL (1)</b>					<b>(\$ ) 770.00</b>

**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims	Extra Claims	Fee from below	Fee Paid
35	-20** = 15	18.00	270.00
Independent Claims	13	-3** = 10	860.00
Multiple Dependent			

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2)** (\$ ) 1,130.00

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION** (continued)**3. ADDITIONAL FEES**

Large Entity Small Entity


Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	40
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)** (\$ ) 40.00**SUBMITTED BY**

(Complete if applicable)

Name (Print/Type)	Paul J. Farrell	Registration No. (Attorney/Agent)	33,494	Telephone	(516) 228-8484
Signature		Date	10/9/03		

**CERTIFICATION UNDER 37 C.F.R. §1.10**

I hereby certify that this correspondence and the documents referred to as enclosed are being deposited with the United States Postal Service on date below in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV 333229179 US addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: October 9, 2003

John F. Gallagher III

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**UTILITY APPLICATION DATA SHEET UNDER 37 C.F.R. §1.76**

Sir:

Transmitted herewith for filing is the patent application of

Inventor(s): Chan-Soo HWANG, Vahid TAROKH, Seung-Hoon NAM,  
Jae-Hak CHUNG, and Yung-Soo KIM,

For: **TRANSMITTING AND RECEIVING APPARATUS FOR SUPPORTING**  
**TRANSMIT ANTENNA DIVERSITY USING SPACE-TIME BLOCK CODE**

Enclosed are:

- [X] 36 page(s) of specification  
[X] 1 page(s) of Abstract  
[X] 22 page(s) of claims  
[X] 15 sheets of drawings [x] formal [ ] informal  
[X] 7 page(s) of Declaration and Power of Attorney

ASSIGNEE NAME: SAMSUNG ELECTRONICS CO., LTD.

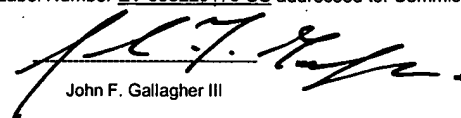
ASSIGNEE RESIDENCE: KYUNGKI-DO, KOREA

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**CERTIFICATION UNDER 37 C.F.R. 1.10**

I hereby certify that this New Application Transmittal and the documents referred to as enclosed therein are being deposited with the United States Postal Service in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV 333229179 US addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date listed below

Dated: October 9, 2003

  
John F. Gallagher III

**Atty. Dock t No. 678-1109 (P10973)**

- ☒ This application claims the benefit under 35 U.S.C. §119(e) of U.S. Provisional Application(s) No(s):

APPLICATION NO(S):

FILING DATE

60/417,466

October 10, 2002

- ☒ Certified copy of application

Country

Appln. No.

Filed

Korea

2003-21364

April 4, 2003

from which priority under Title 35 United States Code, § 119 is claimed

- ☒ is enclosed.

- ☐ will follow.

**CALCULATION OF UTILITY APPLICATION FEE**

For	Number Filed	Number Extra	Rate	Basic Fee \$770.00
TOTAL CLAIMS	35	15	x 18 =	\$270.00
INDEPENDENT CLAIMS	13	10	x 86 =	\$860.00
<input type="checkbox"/> Multiple Dep. Claim			280	\$0.00
				<b>TOTAL \$1,900.00</b>

- ☐ Verified Statement of "Small Entity" Status Under 37 C.F.R. § 1.27. Reduced fees under 37 C.F.R. § 1.9(f) (50% of total) paid herewith \$.

**Atty. Dock t No. 678-1109 (P10973)**

- ☒ The amount of \$40.00 for recording the attached Assignment is enclosed as a separate check.
- ☒ Check in the amount of \$1,900.00 to cover filing fee is attached.
- ☐ Charge fee to Deposit Account No. 04-1121.  
TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

☒ Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. § 1.16 and 1.17, at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 04-1121. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 04-1121 therefor. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

Respectfully submitted,

Date: October 9, 2003



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Paul J. Farrell  
Reg. No. 33,494  
Attorney for Applicant

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